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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,062	12/31/2001	Yun Bok Lee	049128-5036	5647
9629	7590	11/16/2004		
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004				
			EXAMINER: WARREN, MATTHEW E	
			ART UNIT 2815	PAPER NUMBER

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/032,062	LEE, YUN BOK	
	Examiner	Art Unit	
	Matthew E Warren	2815	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 August 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

This Office Action is in response to the Amendment filed on August 27, 2004.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (US 5,184,236) in view of Kim (US 6,177,970 B1).

In re claim 1, Miyashita et al. shows (fig. 4 and col. 8, lines 8-30) a liquid crystal display device having liquid crystal cells arranged in a matrix comprising a gate line for receiving a scanning signal, a data line for receiving a data signal, and a pixel electrode (105) provided at an intersection of the gate line and the data line to drive a liquid crystal cell. A thin film transistor (106) for responding to the scanning signal is used to switch the data signal into the pixel electrode. An alignment film (107) is formed on at least a portion of the gate line, the data line and the pixel electrode to determine a primary alignment direction of a liquid crystal (col. 8, lines 27-30). Miyashita shows all of the elements of the claims except the alignment film contacting the common line. Kim shows (figs. 1 and 2) a liquid crystal display device having liquid crystal cells arranged in a matrix type, comprising a common line (310) laterally adjacent to the pixel electrode (810). An alignment film (90) contacts the common line. With this configuration, the

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drive voltage is minimized and the generation of an afterimage is reduced (col. 3, lines 44-52). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the alignment film of Miyashita by forming the film in contact with a common line as taught by Kim to minimize the drive voltage and reduce an afterimage in an LCD device.

In re claims 2 and 3, Kim discloses (col. 48-52) that the alignment film is formed of polyimide resin and had has a thickness of 700 Angstroms. The dielectric constant is inherently 3 because the material of Kim's alignment film is the same as the instant invention.

Claims 4, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (US 6,215,541 B1) in view of Kim (US 6,177,970 B1).

In re claim 4, Song et al. shows (figs 5-7) a liquid crystal display device having liquid crystal cells arranged in a matrix type comprising a gate line (20) for receiving a scanning signal, a data line (60) for receiving a data signal, a pixel electrode (65) and a common electrode (11) provided at a pixel area near an intersection of the gate line and the data line to drive a liquid crystal cell. A thin film transistor (col. 5, lines 48-67) for responding to the scanning signal is used to switch the data signal into the pixel electrode. A common line (part of 11) is laterally adjacent to the pixel electrode along a direction of one of the gate and data lines. An alignment film is entirely coated on the substrate to protect the signal wires including the gate line, the data line, the pixel electrode and the common electrode and to determine a primary alignment direction of

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the liquid crystal (col. 7, lines 12-14). Song shows all of the elements of the claims except the alignment film contacting the common line. Kim shows (figs. 1 and 2) a liquid crystal display device having liquid crystal cells arranged in a matrix type, comprising a common line (310) laterally adjacent to the pixel electrode (810). An alignment film (90) contacts the common line. With this configuration, the drive voltage is minimized and the generation of an afterimage is reduced (col. 3, lines 44-52). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the alignment film of Song by forming the film in contact with a common line as taught by Kim to minimize the drive voltage and reduce an afterimage in an LCD device.

In re claims 7 and 8, Kim discloses (col. 48-52) that the alignment film is formed of polyimide resin and had has a thickness of 700 Angstroms. The dielectric constant is inherently 3 because the material of Kim's alignment film is the same as the instant invention.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (US 6,215,541 B1) in view of Kim (US 6,177,970 B1) as applied to claim 4 above, and further in view of Kim et al. (US 6,388,727 B2).

In re claim 5, Kim '970 already shows (fig. 2) that the pixel electrode (810) and common electrode (310) are formed in the same layer. Song and Kim '970 do not show that the common electrode is formed of transparent conductive material. Kim et al. '727 teaches (col. 6, lines 21-26) that the common electrode may be formed of a transparent conductive material such as ITO. Therefore it would have been obvious to one of

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ordinary skill in the art at the time the invention was made to modify the pixel and common electrodes of Song and Kim '970 by forming using ITO because Kim et al. '727 teaches that such materials are suitable for simplifying LCD devices.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-5, 7, and 8 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E Warren whose telephone number is (571) 272-1737. The examiner can normally be reached on Mon-Thur and alternating Fri 9:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEW  
*Mew*  
November 15, 2004

*Tom Thomas*  
TOM THOMAS  
SUPERVISOR / EBC / EBC  
TECHNICAL CENTER 2815